Indian Institute of Technology Patna
CS1101- Foundations of Programming

Lab13: File Handling, and Programming

Date: 3-11-2025

Work in a separate directory named **Lab13**.

Task1: Carefully explore the provided Lab13_file.*c* c program segments. Study each segment demonstrated in the code, and document in your lab record any constructs or features that are new to you, along with brief notes on your observations.

Task2: Write a small C program, compile it, and then use standard Linux binary-analysis tools to inspect both a small binary data file and your compiled executable. For example (hexdump -C file.bin, objdump -d a.out, strings a.out, file a.out, readelf -l a.out, readelf -h a.out)

Task3: Create a program that opens an existing file in read mode, reads its contents character by character using the fgetc() function and does the following:

- Displays each character on the console until the end of the file (EOF) is reached. The program should handle cases where the file does not exist or cannot be opened and provide appropriate error messages.
- Reverses the order of words in the existing file without reversing the individual words themselves, and saves the result in a new file. For example, the last word in the original file should appear as the first word in the new file, the second-to-last word should appear as the second word, and so forth.

Task4: Write a C program to manage a text file by performing three operations:

○ Write multiple lines to a file based on the number of lines the user gives.

○ Reading and storing the file contents in memory.

○ Allowing the user to update a specific line in the file.

The program should be able to:

● Write multiple lines: The user specifies how many lines to write, then inputs each line. The program writes these lines to a file.

● Read and store file contents in memory: The program reads and stores each line from the file.

● Update a specific line: The user can select a line number to update and input new content for that line, and the program will overwrite the existing file with the updated content.

● Go through the file to confirm the file writing is successful before and after the update.

Task5: Write your own file handing problem statement and provide solution

In Record: Task1 , Task 5